**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CIRBA INC. D/B/A DENSIFY
and CIRBA IP, INC.,

                    Plaintiffs,

       v.

VMWARE, INC.,

                    Defendant.

Civil Action No. 1:19-cv-00742-LPS

███████████████████

JURY TRIAL DEMANDED

PUBLIC - REDACTED VERSION

**PLAINTIFFS' OPENING BRIEF IN SUPPORT
OF THEIR MOTION FOR A PRELIMINARY INJUNCTION**

Kenneth L. Dorsney (#3726)
MORRIS JAMES LLP
500 Delaware Avenue, Suite 1500
Wilmington, DE 19801
(302) 888-6800
kdorsney@morrisjames.com

ATTORNEYS FOR PLAINTIFFS
CIRBA INC. (D/B/A DENSIFY)
AND CIRBA IP, INC.

Dated: May 6, 2019

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Statutes

Plaintiffs Cirba Inc. d/b/a Densify and Cirba IP, Inc. (collectively, "Densify") respectfully submit this Opening Brief In Support Of Their Motion For Preliminary Injunction (the "PI Motion"). For the reasons stated herein, Densify respectfully requests that the Court preliminarily enjoin Defendant VMware, Inc. ("VMware") from making, using, selling, or offering for sale certain products that infringe U.S. Patent No. 8,209,687 ("the '687 Patent") pending a trial on the merits, as set forth in the proposed order attached to the PI Motion.

INTRODUCTION

The right to exclude competitors from infringing is the essence of the patent grant. And for that right to be meaningful in this case, a preliminary injunction is needed to maintain the status quo pending a merits trial. ██ ██. In the last few months, it has become clear that VMware's recent launch of version 7 of its vROps product infringes Densify's patent ██ ████████████████████████ the newest release of vROps 7.5 in April 2019.

Densify is a software company that focuses on what is known as workload optimization in running virtual infrastructure on physical servers. It has a vibrant customer base among *Fortune 5000* organizations, which use Densify's award-winning software to reduce costs, operate with less infrastructure, and achieve better application performance. The patent at issue in the PI Motion relates to the core of Densify's workload optimization technology, for which sophisticated corporate customers pay millions of dollars each year.

Densify's software (the "Densify Product") historically worked in tandem with VMware's virtualization product. They worked together because the Densify Product did things VMware's product did not, and it improved the infrastructure efficiency obtained by customers using VMware's product. This synergy has been appreciated by customers, which historically have

1

purchased both products. Over the years, VMware has slowly begun encroaching on Densify's patents, but VMware's vROps product did not perform host-based workload optimization, leaving space for Densify's patented products.

Densify's record of innovation did not escape VMware's notice. ███████

███████████████████████████████████████

███████████████████████████████████████

███████████████████████████████████████

███████████████████████████████████████

███████████████████████████████████████

████████████████████████████

████████████████, VMware appears to have used ███████ to systematically copy Densify's technology. Version 7 of VMware's vROps software is a blatant infringement of Densify's workload optimization patent. That patent is the core of the Densify Product.

Not only is vROps v7 now right on top of Densify's workload optimization patent, but for the first time, it has copied enough of Densify's features ██████████████

████████ To make matters worse, VMware is using the DENSIFY trademark to promote its new software, and its vROps product has a user interface so similar to Densify's that a customer mistakenly thought VMware must have acquired Densify. VMware is even telling customers that they no longer need to buy the Densify Product now that vROps v7 is on the market.

If sales of VMware's vROps v7 are not halted until trial, Densify's competing business line will be ███████. ██████████████████████████

███████████████████████████████████████

███████████████████████████████, and with VMware offering to

2

upgrade customers from version 6 for "free" to the infringing vROps v7, by the time a merits trial ordinarily would take place, ███████████████████████████████.

VMware's infringement during the pendency of this case threatens a cascading series of ███ ███ ██. None of these could be fully remedied by money damages.

Densify seeks to maintain the status quo through a preliminary injunction that halts VMware's sale of vROps v7 until a trial on the merits can be held. The balance of the harms heavily favors entry of a preliminary injunction. As a multi-billion dollar corporation with 99% of the *Fortune 1000* as customers, VMware holds a dominant market position, a formidable marketing and sales war chest, and superior distribution channels. Without immediate protection of its patent rights, Densify ████████████████████████ the years it takes a typical patent case to get to trial. Any temporary harm to VMware from a preliminary injunction is far outweighed by the ████████████████████████████████████. VMware has a working version 6 of vROps on the market still, and it can continue to sell this product in the meantime. And if as it appears, VMware is not even charging customers for an upgrade to its new version 7, it has little to lose by pausing sales until trial.

███ ███████████████████████████████. Densify chose to not license its patents, instead competing on the strength of innovations it worked so hard to create. ████████████████ ███ ███

███

████████████████

Densify appreciates that the relief it requests is extraordinary and therefore requests that the Court permit the parties to conduct focused, expedited discovery before presenting their cases at an evidentiary hearing, as set forth in Densify's Motion for Hearing and Expedited Discovery. Accordingly, Densify respectfully requests that the Court issue a preliminary injunction as set forth in the proposed order attached to the PI Motion.

BACKGROUND

A.   Densify And Its Award-Winning Technology

Densify is a technology company that sells software used by companies to improve their information technology ("IT") infrastructure. Declaration of Andrew Hillier ("Hillier Decl.") ¶¶ 7-13. In particular, Densify provides machine learning analytics software related to both IT infrastructure that companies operate (called "on-premises" infrastructure) and those that they use in the public cloud (such as Amazon Web Services). *Id.* ¶¶ 16-19. Densify counts among its customers dozens of leading global companies with sophisticated IT needs. *Id.* ¶ 33. Its products save those companies tens of millions of dollars in infrastructure costs, reduce risks, and allow greater efficiency and performance. *Id.* ¶ 32.

Densify has grown to over 180 employees, serving companies primarily in the U.S., as well as elsewhere around the world. *Id.* ¶ 7. With roots dating to 1999, Densify has built its business on innovation. *Id.* ¶ 8. It has won numerous awards for its workload optimization software, and is recognized as an industry leader in this space. *Id.* ¶¶ 34-36.

A little background on the technology is helpful to understand Densify's inventions. The technology is summarized in the Declaration of Andrew Hillier, who is one of Densify's founders, an inventor on its patents, and its current Chief Technology Officer. *Id.* ¶¶ 1-4. Additional

10925146/1

technical background is provided by Professor Vijay Madisetti, who is a tenured Professor of Electrical and Computer Engineering at the Georgia Institute of Technology ("Georgia Tech"). Declaration of Dr. Vijay Madisetti ("Madisetti Decl.") ¶¶ 13-14.

As Prof. Madisetti explains, in computing, "virtualization" refers to the act of creating a "virtual" version of something. *Id.* ¶ 54. Virtualization relies on software to simulate hardware functionality and create a virtual computer system, which allows companies to run more than one application (frequently referred to as workload) on a single physical server using virtual machine ("VM") technology. *Id.* In virtualized environments, the physical server and related software can be called a "host." *Id.* ¶ 56. The VM running on the host can be called a "guest." *Id.* With virtualization, one host can run many applications because each application runs on a VM sharing the resources of the physical host. *Id.* ¶ 54. Without virtualization, different applications running on the same host would create resource conflicts—each piece of software competing for limited processing and storage capabilities of a physical server. *See id.* ¶¶ 51 and 54-55. Simplified, VMs allow time and capacity sharing among competing workloads and their operating systems on the same physical server. *Id.* ¶¶ 57-58. If one server can host multiple VMs, the utilization of its resource capacity becomes more efficient, and requires fewer physical resources and software licenses, and hence costs less. *See, e.g.*, *id.* ¶ 142.

Companies with large IT infrastructures, especially those with servers numbering in the thousands, face highly complex decisions to properly manage their VMs. Hillier Decl. ¶¶ 10-13. This management involves making decisions about which VMs to run on which hosts. *Id.* ¶¶ 14-15. Running too few VMs or applications on a host means that more servers or capacity must be purchased. *Id.* ¶ 15. Running too many VMs or applications can create risk by over-utilizing hardware—i.e., where VMs compete for the same resources (resource contention). *Id.*

The Densify Product addresses these needs through host-based workload optimization. *Id.* ¶ 16. It allows companies to manage how their virtual infrastructure is used and to optimize that use with automation. *Id.* The Densify Product includes predictive analytics software that takes into account workload, business, and technical constraints to optimally place VMs on hosts. *Id.* ¶ 14. The Densify Product anticipates capacity risk, places workloads, and allocates resources to avoid capacity shortfalls, and meet compliance and other key operating policies, which results in reducing unnecessary movement of VMs and avoiding performance issues. By so doing, it can save companies millions of dollars in server and software costs, reduce risk, and improve efficiency. *Id.* ¶ 27. The Densify Product can provide average savings of 33% on hardware and over 55% on software. Madisetti Decl. ¶ 76.

Densify has built a customer following over the years based on inventions saving customers money running their IT infrastructures. Through 15 years of hard work and tens of millions of dollars of investment, Densify became a leader in the VM workload optimization space. *See, e.g.,* Hillier Decl. ¶¶ 10-11 and 35-36. Densify developed an industry reputation for innovative, helpful products that were ahead of the market. *Id.* ¶¶ 32-36. Its customers, some of which are managing tens of thousands of VMs, have included such companies as ███████████████████ ██ ███████████████████████, and many others. *Id.* Attracting prominent customers further enhances Densify's reputation, making it a safer choice for new customers. *Id.* ¶ 33.

The '687 Patent is at issue in the PI Motion.[1] The '687 Patent covers the bedrock of Densify's host-based workload optimization technology. In general terms, it relates to managing

---

[1] Plaintiff Cirba IP, Inc. owns the '687 Patent, which it exclusively licenses to its parent company, Cirba Inc. For clarity, the '687 patent is referred to as Densify's patent herein.

6

a virtualized environment through host-based workload optimization—by evaluating each host (relating to a physical machine) against each guest (relating to a VM), as well as evaluating the guests against other guests, using sets of rules relating to technical, business, and workload constraints. Madisetti Decl. ¶¶ 67-72. The patented invention identifies the existence of VMs with suboptimal placements in the virtualized environment. *Id.* ¶ 70.

Densify has not licensed its patents to third parties. Hillier Decl. ¶¶ 37 and 39. Instead, it has relied on the exclusivity afforded by its patents to develop market-leading products that allow it to effectively compete against multi-billion dollar companies such as VMware.

B.   Densify's Relationship With VMware

VMware is a company historically focused on virtualization software. *Id.* ¶ 41. It is known for its innovation of the hypervisor—the layer of software that enables virtualization. *Id.* Although VMware has expanded its offerings over the years, the hypervisor has been its critical software product dominant among companies with virtual machine environments. *See id.* ¶ 42.

For years, Densify's business has complemented VMware's offerings—its products were distinct and did different things. *Id.* ¶¶ 43-47. Accordingly, many of Densify's clients have historically purchased both VMware's product and the Densify Product. *Id.* ¶ 46.

███.
Id. ¶¶ 49-72. ███████████████████████████████████████. *Id.* ¶¶ 54-69. Over 25

██

███████████████████████ *Id.* ¶ 54. █████████████████████

██

██

Id. ¶¶ 52 and 55. ████████████████████████████████████

███████████████████████ *Id.*¶¶ 55 and 61-63. ███████████████

7

10925146/1

███

███████████████████████████████████. *Id.* ¶ 51. ███████

███

█████████████████████████ *Id.* ¶ 77.

███

████████████████████████████ *Id.* ¶ 66. ████████████

██. *Id.* ¶ 67.

███

███

███

████████████████████████████ *Id.* ¶¶ 68-69. Instead, it systematically

copied key features ███

██████████████████ *Id.* ¶ 69. The sequence events shows VMware knew all about

Densify's technology and patents, and directly copied the most important features. These features

included Densify's patented host-based workload optimization technology. *See id.* ¶ 70-73.

C.   VMware's Launch Of Infringing vROps Version 7

In Fall 2018, VMware launched version 7 of its product known as "vROps," which stands

for vRealize Operations. Hillier Decl. ¶ 79. Densify was shocked to discover that VMware had

copied the very patented features ████████████████████████████████████. *Id.*

¶¶ 66-67, 79. The commercial significance to Densify began to emerge over the next few months,

during which it became clear that VMware's infringement has reached a point that it █████████

████████████████████████████████, which was compounded by the

vROps 7.5 release in April 2019. *Id.* ¶¶ 80-83. Making matters worse, VMware is brazenly using

the DENSIFY trademark to describe its offerings, and is telling customers that they no longer need

to buy the Densify Product now that version 7 of vROps—which infringes Densify's patent—is on the market. *Id.* ¶¶ 105-108. Version 7 continues to use a dashboard that is so similar it confused a customer into mistakenly believing that Densify must have been acquired by VMware. *Id.* ¶ 74.

Version 7 of vROps has added host-based workload optimization just as disclosed in the '687 patent, and as ███████████████████████████. *See id.* ¶ 82. For example, it adds an infringing "Automated Host Based Placement" feature that controls workload placement on hosts within a cluster, as in the Densify Product. *Id.* ¶ 81. Prior to version 7, vROps did not have the capability of host-based workload optimization based on business intent. *Id.* ¶ 82. This capability allows a customer to "automatically drive" its "business intent," and enables VMware to promote software license control and workload optimization, features ████████ ███████████████████. *Id.* Release 7.5 of vROps in April 2019 continues to use these infringing host-based placement features and improves their function. *Id.* ¶ 83.

████████████████████████████████████

Because prior versions of vROps did not provide host-based workload optimization, Densify had space to compete on the strength of its patented innovation. *See id.* ¶ 90. ███████████ when VMware began flooding the market with promotions focused on the new, infringing functionality of vROps v7. *Id.* ¶¶ 93-108. As VMware describes it:

> Honestly, when I start talking about these three [features], for people when I show them the first one -- customers I show the first one – "Yeah, okay, I get that. That's cool." And then Densification, "Yeah, I've had that need." And then you get to this one [host-level-license based enforcement] and they're like, "Oh my god, I'm going to implement that one right away. This is ridiculous." . . .

Id. ¶ 97. VMware's marketing emphasizes the ground-breaking nature of its new (infringing) features, which it describes as a "game changer." *Id.* ¶ 103.

In the first four months of this year, it has become clear that the sale of vROps v7 ██████ ████████████████████████. *Id.* ¶¶ 110-23. With the release of

version 7, vROps is for the first time ████████████████████████████████. *Id.*

The infringing features of version 7 have ████████████████████████████████

████████████████████████ *Id.* ¶ 112.

██

██ *Id.*

¶ 114-16. ████████████████████████████████

████████████████████████████████ *Id.* ¶¶ 117-18.

████████████████████████████████████

████████████████ *Id.* ¶ 119.

████████████████████████████████████

████ *ee id.* ¶ 121. ████████████████████

████████. *Id.* ¶ 113; Declaration of Riyaz Somani ("Somani Decl.") ¶ 6. ████████

██

████████████████ Hillier Decl. ¶ 120 ████████████

██

████████████████████████ *Id.* ¶ 121. ████████

██

████████████████████████ *Id.* ¶ 122.

And VMware shows no signs of letting up. ████████████████

████████████ *Id.* ¶ 108. ████████████████████

████████████████████████ *Id.* ¶ 109. VMware's momentum

in marketing features of vROps 7.5 that infringe Densify's workload optimization patent is

illustrated by the following April 25, 2019 marketing. *Id.* ¶ 101.

Densify seeks to maintain the status quo by halting VMware's infringing "Workload Optimization Train" until a merits trial can take place. ███████████

███████████████████████ Hillier Decl. ¶¶ 110-133. ███████

███████████████████████████████████████

███████████████████████████████████████

███████████████████████████████████████

███████████████████████████ *Id.* ¶¶ 124-31.

ARGUMENT AND CITATION OF AUTHORITIES

"The essential attribute of a patent grant is that it provides a right to exclude competitors from infringing the patent." *Acumed LLC v. Stryker Corp.*, 551 F.3d 1323, 1328 (Fed. Cir. 2008) (citing 35 U.S.C. § 154(a)(1)). The right to exclude is particularly important where the parties are competitors, and where the patentee, like Densify, has chosen to not license its patent. *See Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 2010 WL 817519, at *4 (M.D. Pa. Mar. 9, 2010), *aff'd*, 477 F. App'x 740 (Fed. Cir. 2012).

"A plaintiff seeking a preliminary injunction must establish that he is likely to succeed on the merits, that he is likely to suffer irreparable harm in the absence of preliminary relief, that the balance of equities tips in his favor, and that an injunction is in the public interest … A preliminary injunction is an extraordinary remedy that may only be awarded upon a clear showing that the plaintiff is entitled to such relief." *Trebro Mfg., Inc. v. Firefly Equip., LLC*, 748 F.3d 1159, 1165 (Fed. Cir. 2014) (quotation omitted); *see also Issa v. Sch. Dist. of Lancaster*, 847 F.3d 121, 131

11

(3d Cir. 2017).   As this Court has recognized, there are circumstances in which without a preliminary injunction, "the core right protected by [Plaintiff's] patent—the right to exclude— would effectively be rendered meaningless". *Edwards Lifesciences AG v. CoreValve, Inc.*, 2014 WL 1493187, at *7 (D. Del. Apr. 15, 2014).   This is one of those circumstances.

I.   DENSIFY IS LIKELY TO SUCCEED ON THE MERITS OF ITS CLAIM.

To establish a likelihood of success on the merits, a patentee must show that it will likely prove infringement of at least one claim and that its infringement claim will likely withstand the alleged infringer's challenges to patent validity and enforceability. *Metalcraft of Mayville, Inc. v. Toro Co.*, 848 F.3d 1358, 1364 (Fed. Cir. 2017).

A.   Densify Is Likely To Prove VMware Infringes The '687 Patent.

It is an act of infringement to make, use, sell, offer to sell or import an invention covered by the claims of a patent without the authority of the patentee.   35 U.S.C. § 271(a). A determination of infringement requires a two-step analysis: "First, the court determines the scope and meaning of the patent claims asserted . . . and then the properly construed claims are compared to the allegedly infringing device." *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc) (citations omitted).

Here, infringement is a straightforward issue of applying the claim language to VMware's product, with VMware's own public tutorials, videos, and documentation describing how vROps v7 contains the claimed elements.   Densify's Patent claims describe the very type of optimization of workloads that VMware has newly implemented in order to catch up with Densify's capabilities. Claim 7 is illustrative, and recites as follows:

> [*7pre*] A method for validating an existing virtualized environment comprising a plurality of virtual machines placed on one or more virtual hosts, said method comprising:
>
> [*7a*] obtaining a data set for each of said plurality of virtual machines, each data set

comprising information pertaining to technical, business and workload constraints associated with a corresponding virtual machine;

[*7b*] evaluating the placement of said virtual machines in said virtualized environment using said data sets by evaluating each virtual guest against each virtual host and other virtual guests using one or more rule sets pertaining to said technical, business and workload constraints to determine guest-host placements; and

[*7c*] identifying the existence of virtual machines with suboptimal placements to enable alternative placements for said virtual machines.

Madisetti Decl., Ex. 84 at claim 7.

1.   The '687 Patent Does Not Present Terms Requiring Construction.

No formal claim construction is necessary because the claims of the '687 patent use clear technical terms that should all be accorded their plain and ordinary meaning. *Biotec Biologische Naturverpackungen GmbH & Co. KG v. Biocorp, Inc.,* 249 F.3d 1341, 1349 (Fed. Cir. 2001) ("the meaning of 'melting' does not appear to have required 'construction,' or to depart from its ordinary meaning"); *Mentor H/S, Inc. v. Medical Device Alliance, Inc.,* 244 F.3d 1365, 1380 (Fed. Cir. 2001) (holding that district court properly instructed jury to use ordinary meanings for "irrigating" and "frictional heat").   Not every claim limitation—or even every claim—requires construction. *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). Claim construction is appropriate to "clarify and when necessary to explain what the patentee covered by the claims." *Id.*   No such clarification is necessary here.   For example, claim 7 uses technical terms that are well understood by skilled artisans, such as, "virtual machines," "virtual host," and "virtualized environment." *See* Madisetti Decl. ¶¶ 73-74.   The technical terms in the patent are used in the manner consistent with their plain and ordinary meanings with which they would have been ascribed by skilled artisans at the time of the claimed invention. *Id.* ¶ 74. Each of the asserted

claims 2, 7, 13, and 16 do not require construction. *See id.*[2]

2. **VMware's vROps 7.0 Infringes Claim 7 Of The '687 Patent.**

"Literal infringement of a claim exists when every claim limitation 'reads on'—or, in other words, is found in—the accused device or method." *Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1345 (Fed. Cir. 2002). A detailed infringement analysis of claims 2, 7, 13, and 16 is set forth in Prof. Madisetti's Declaration, which relies on and includes excerpts of VMware's own descriptions of vROps 7.0. Madisetti Decl. ¶¶ 106-55. Given space limitations, the infringement analysis detailed in Prof. Madisetti's Declaration is summarized here and can be presented at a preliminary injunction hearing with demonstratives to aid in illustrating the concepts. At a high level, vROps v7 infringes claim 7 because it performs the claimed method during the installation of vROps, as well as when it conducts "Capacity Optimization," "Workload Optimization," including the newly added host-based placement feature, and "What-If Analyses." *Id.* ¶ 111.

When these features are executed, vROps validates a virtualized environment by evaluating each virtual guest with each virtual host and other virtual guests by using a constraint-based analysis (e.g., technical, workload, and business constraints) and identifies virtual machines in the virtualized environment that are not optimally placed. *Id.*

The preamble of claim 7 (***Claim 7pre***) introduces the claim as a "method for validating an existing virtualized environment comprising a plurality of virtual machines placed on one or more virtual hosts." vROps is a virtualized environment management tool that does exactly that, it assesses the placements of VMs on hosts. *Id.*

Limitation 7a describes the beginning of the process, "obtaining a data set for each of said

---

[2]   In any event, to the extent VMware proposes a particular construction, the Court can decide the issue at the preliminary injunction hearing.

plurality of virtual machines, each data set comprising information pertaining to technical, business and workload constraints." VMware itself explains that it performs this step, describing that it "collects performance data from monitored software and hardware resources in your enterprise and provides predictive analysis and real-time information about problems." *Id.* ¶ 112. The data include information pertaining to technical (e.g., configuration), business (e.g., license control), and workload (e.g., CPU use) constraints, which are used in the next steps. *Id.*

Limitation 7b is "evaluating the placement of said virtual machines in said virtualized environment using said data sets by evaluating each virtual guest against each virtual host and other virtual guests using one or more rule sets pertaining to said technical, business and workload constraints." vROps 7.0 performs this step by using the data described above to determine what issues are present when various virtual guests are assigned to various virtual hosts. *Id.* ¶ 116. As described by Prof. Madisetti, vROps 7.0 meets this limitation because it both evaluates each virtual guest against each virtual host (e.g., to ensure that each guest is on a host that has the data it may need, is not too busy, and/or has the appropriate licenses), and also evaluates virtual guests against other virtual guests (e.g., a virtual guest may have "noisy neighbors," or two virtual guests that must be kept apart for regulatory compliance reasons). *Id.* ¶¶ 117-18.

Finally, *Limitation 7c* describes the step vROps performs once it makes the evaluations of the prior step: "identifying the existence of virtual machines with suboptimal placements to enable alternative placements for said virtual machines." vROps does this, for example, when it identifies sub-optimal VM placements based on "Business and Operational Intent" as part of workload optimization. *Id.* at ¶ 111. In sum, vROps manages virtual environments by performing the steps of claim 7, including obtaining the data described in claim 7, performing the evaluations, and identifying where changes need to be made. *Id.*

There is a high likelihood of success of establishing infringement -- the proof of infringement presented here is based on VMware's own descriptions, demonstrations, use, offers for sale, and use of vROps, making VMware a direct infringer of claim 7. *Id.* ¶¶ 106-29. VMware also indirectly infringes claim 7 under 35 U.S.C. §§ 271(b) and (c), as set forth in Professor Madisetti's declaration. *Id.* ¶¶ 130-55. VMware induces infringement by providing information that instruct customers and third parties how to use infringing vROps features as part of the product's normal and intended operation. *See, e.g., id.* ¶¶ 132-40. At least as of the time the preliminary injunction is to take effect, VMware will know that such instructions for use will induce infringement. *Liqwd, Inc. v. L'Oreal USA, Inc.*, 720 F. App'x 623, 629 (Fed. Cir. 2018). Contributory infringement also is established at least because vROps v7 is a material component used in practicing the patent, and has no significant noninfringing use. Madisetti Decl. ¶¶ 149-52.

3.   VMware's vROps Infringes Claims 2, 13, And 16 Of The '687 Patent.

Version 7 of vROps also infringes claims 2, 13, and 16 because of the same functionality described for claim 7, in addition to features such as "generating a virtual environment design" and "designing a virtualized environment," that vROps performs upon installation, or when expanding or modifying an existing environment. *See id.* ¶ 124. These additional claimed features, like those described in claim 7, also are performed by VMware itself during demonstration and installations for customers and when conducting "What-If Analysis," such that VMware is also a direct infringer of claims 2, 13, and 16, and VMware induces customers to perform them and contributes to their infringement so as to be an indirect infringer of claim 2. *Id.* ¶ 125.

B.   The '687 Patent Will Likely Withstand A Validity Challenge.

"The patent enjoys the same presumption of validity during preliminary injunction proceedings as at other stages of litigation." *Titan Tire Corp. v. Case New Holland, Inc.*, 566 F.3d 1372, 1377 (Fed. Cir. 2009). "[W]hen analyzing the likelihood of success factor, the trial court,

16

after considering all the evidence available at this early stage of the litigation, must determine whether it is more likely than not that the challenger will be able to prove at trial, by clear and convincing evidence, that the patent is invalid." *Id.* at 1379.

1.   The '687 Patent Is Valid Over Prior Art.

Densify is not aware of any prior art that raises a serious question as to the validity of the '687 patent. Madisetti Decl. ¶ 162. In fact, the '687 patent was allowed to issue over considerable prior art—a total of 39 prior art references are cited on the face of the '687 patent. In addition, the '687 patent has been cited by 151 later-filed patent applications. *Id.* ¶ 163.

2.   Objective Indicia Of Non-Obviousness Further Demonstrate Validity Of The '687 Patent.

There is ample evidence of secondary considerations of non-obviousness. *Id.* ¶ 164-68. The Densify Product practices the '687 Patent and took millions of dollars and years to build and refine. Hillier Decl. ¶¶ 79, 133. Densify has enjoyed commercial success in the form of tens of millions of dollars of sales of the Densify Product. *Id.* ¶ 34. In addition, the claimed inventions of the '687 patent gained industry acceptance by, among other things, key competitors like VMware adopting and implementing the claimed invention in their respective products. Madisetti Decl. ¶ 167. Further, VMware systematically copied the Densify Product's key differentiators, embodying the patented invention. Hillier Decl. ¶ 78. Finally, the claimed inventions have been the subject of immense and continuous praise by others. For example, Densify has received numerous industry awards, including being the Best of VMworld 2007 and 2017. *Id.* ¶ 35. Densify would hardly have received these awards at VMware's signature event for an obvious invention.

The substantial evidence of non-obviousness further demonstrates that VMware will not prove at trial, by clear and convincing evidence, that the patent is invalid. *Advanced Transit Dynamics, Inc. v. Ridge Corp.*, 2015 WL 12516692, at *24 (C.D. Cal. Aug. 24, 2015)("Thus,
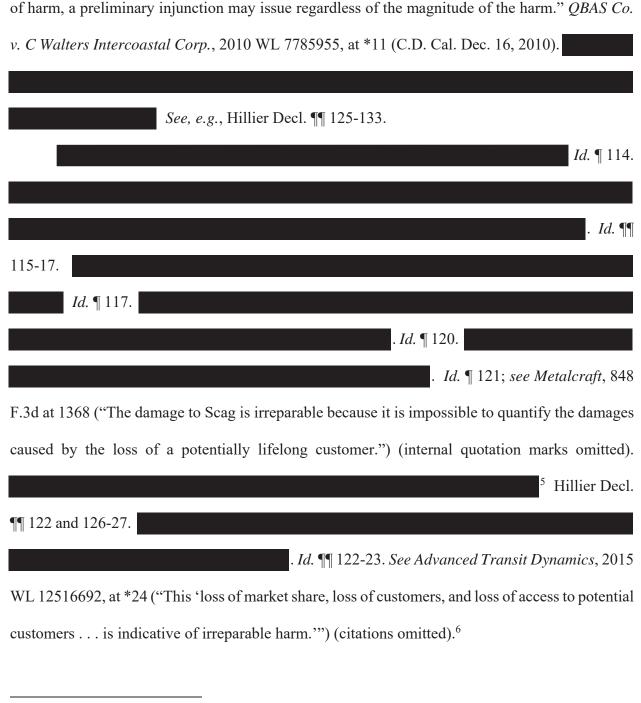
10925146/1

secondary considerations reinforce a finding that Ridge has not raised a substantial question concerning the obviousness of these patents."); *Mylan Institutional LLC v. Aurobindo Pharma Ltd*, 2016 WL 7587325, at *22 (E.D. Tex. Nov. 21, 2016), report and recommendation adopted, 2017 WL 497593 (E.D. Tex. Feb. 7, 2017), aff'd as modified sub nom. Mylan Institutional LLC v. Aurobindo Pharma Ltd., 857 F.3d 858 (Fed. Cir. 2017)("[O]bjective considerations overwhelmingly weigh against a finding of obviousness.").[3]

II.   DENSIFY WILL SUFFER IRREPARABLE HARM IF VMWARE IS NOT PRELIMINARILY ENJOINED.

"It is well-settled that, because the principal value of a patent is its statutory right to exclude, the nature of the patent grant weighs against holding that monetary damages will always suffice to make the patentee whole." *Hybritech Inc. v. Abbott Labs.*, 849 F.2d 1446, 1456–57 (Fed. Cir. 1988).[4] Courts have found a variety of circumstances to constitute irreparable harm, such as loss of business opportunities, market position, revenue, goodwill, and research and development support, as well as damage to reputation and price erosion, *See Celsis*, 664 F.3d at 930; *M/A-COM Tech. Sols. Holdings, Inc. v. Laird Techs., Inc.*, 2014 WL 2727198, at *5 (D. Del. June 13, 2014); *Abbott Labs. v. Sandoz, Inc.*, 544 F.3d 1341, 1362 (Fed. Cir. 2008). Courts also have recognized that, in particular markets, irreparable harm can include things like losing the ability to establish business relationships, unpredictable injury, and encouraging other potential infringers. *Hybritech Inc.* 849 F.2d at 1456. The Federal Circuit has determined that "[h]ead-to-head competition and lost market share tend to evidence irreparable harm." *TEK Glob., S.R.L. v. Sealant Sys. Int'l, Inc.*, 920 F.3d 777, 793 (Fed. Cir. 2019). "So long as there is a significant threat

---

[3]   Densify will address specific invalidity challenges should VMware raise any.

[4]   "[T]he simple fact that one could, if pressed, compute a money damages award does not always preclude a finding of irreparable harm." *Celsis In Vitro, Inc. v. CellzDirect, Inc.*, 664 F.3d 922, 930 (Fed. Cir. 2012).

18

of harm, a preliminary injunction may issue regardless of the magnitude of the harm." *QBAS Co. v. C Walters Intercoastal Corp.*, 2010 WL 7785955, at *11 (C.D. Cal. Dec. 16, 2010). ██████

██

██████████████████ *See, e.g.*, Hillier Decl. ¶¶ 125-133.

██ *Id.* ¶ 114.

██

██ . *Id.* ¶¶

115-17. ██

██████ *Id.* ¶ 117. ████████████████████████████████████

████████████████████████████████ . *Id.* ¶ 120. ██████████

██████████████████████████████████ . *Id.* ¶ 121; *see Metalcraft*, 848

F.3d at 1368 ("The damage to Scag is irreparable because it is impossible to quantify the damages

caused by the loss of a potentially lifelong customer.") (internal quotation marks omitted).

████████████████████████████████████[5] Hillier Decl.

¶¶ 122 and 126-27. ██████████████████████████████████████

██████████████████████████ . *Id.* ¶¶ 122-23. *See Advanced Transit Dynamics*, 2015

WL 12516692, at *24 ("This 'loss of market share, loss of customers, and loss of access to potential

customers . . . is indicative of irreparable harm.'") (citations omitted).[6]

---

[5]   *See also Celsis In Vitro, Inc.* 664 F.3d at 930 ("There is no effective way to measure the loss of sales or potential growth—to ascertain the people who do not knock on the door or to identify the specific persons who do not reorder because of the existence of the infringer.") (internal quotation marks omitted).

[6]   *See also QBAS*, 2010 WL 7785955, at *12 ("Given the relatively small size of Plaintiff QBAS, losses this great can be devastating and even put QBAS out of business altogether, certainly a factor that must be considered when determining whether irreparable harm will result without a preliminary injunction.").

10925146/1

███

Hillier Decl. ¶ 126. ███

███.

Id. ¶ 125. *See Metalcraft*, 848 F.3d at 1368 ("[T]he loss by Scag of customers may have far-reaching, long-term impact on its future revenues, and the sales lost by Scag are difficult to quantify due to ''ecosystem' effects, where one company's customers will continue to buy that company's products and recommend them to others.'") (citation omitted); *Trebro Mfg. v. FireFly Equip., LLC*, 748 F.3d 1159, 1170 (Fed. Cir. 2014); *Celsis*, 664 F.3d at 932; *Broadcom Corp. v. Qualcomm Inc.*, 543 F.3d 683, 702 (Fed. Cir. 2008).

███

███

██ *Id.* ¶ 126. █████████

██████████████████████████████████████ *Id.* ¶ 128.   Densify has award-winning products and is considered a market leader, and it has been able to differentiate its product from vROps through its patented workload optimization features. *Id.* ██████████████

███

██████████████████████████████████████ *See id.* ██████████████████

████████████████████████████████ *Id.* ¶¶ 126-27. ████████████████

███

██ *Id.* ¶ 128. *See*

Celsis, 664 F.3d at 930-931 ("Mr. Peterson testified to . . . being precluded from marketing to potential and existing customers that it is the exclusive market leader. During the growth stage of a product, it is particularly crucial to be able to distinguish oneself from competitors.").

███

██████████████████████████████████████ Hillier Decl. ¶ 129. Price erosion

has been recognized as irreparable harm because it cannot easily be remedied after the fact. *See*

Edwards Lifesciences, 2014 WL 1493187, at *6-7; *Abbott Labs. v. Sandoz, Inc.*, 544 F.3d 1341,

1362 (Fed. Cir. 2008); *QBAS*, 2010 WL 7785955, at *12 ("Loss of goodwill may include a change

in the marketplace resulting from customers establishing relationships with low-cost infringers.").

███

███

██████████████████████████████ Hillier Decl. ¶ 133. *See Abbott Labs*., 544 F.3d at 1362

(recognizing that loss of research and development support can constitute irreparable harm).

Money damages are particularly insufficient here because Densify chose not to license its

patent, instead using it for its essential purpose: market exclusivity for a period of years. When a

patent holder "strategically declines to license the patent . . . and, instead, exploits its monopoly to

exclude potential rivals, its 'licensing behavior illustrates the insufficiency of money damages for

future infringement.'" *Arlington Indus., Inc.*, 2010 WL 817519, at *4.

Urgency. VMware launched vROps v7 in late September 2018, and released v7.5 on the

market in April 2019. Hillier Decl. ¶¶ 79 and 83. These are complex enterprise products that are

██████████████████████████████ not off-the-shelf retail consumer products. Understanding

the infringing features and commercial impact takes time and investigation.[7] *See, e.g., id.* ¶¶ 80

and 113. The ███████ commercial impact of vROps v7 manifested itself in the first four months

---

[7]   "To the extent that delay can justify denial of a motion for a preliminary
injunction, a delay caused by a plaintiff's good faith efforts to investigate an infringement or to
determine how serious an infringement is does not preclude a finding of irreparable harm." *BP
Chemicals Ltd. v. Formosa Chem. & Fibre Corp.*, 229 F.3d 254, 264 (3d Cir. 2000) (internal
citation and quotation marks omitted).

of 2019 ██

███████████████████████. *Id.* ¶¶ 111-17. VMware's efforts to ramp up promotion of its

infringing features in the last few months confirm this trend. *Id.* ¶¶ 100-06. Densify moved to take

action as soon as it became clear that the infringing products would cause catastrophic damage.

Under circumstances with much longer time periods than here, courts have found sufficient

urgency for a preliminary injunction. *See, e.g.*, *M/A-COM Tech. Solutions Holdings, Inc. v. Laird*

Techs., Inc., 2014 WL 2727198, at *5-6 (sufficient urgency three years after plaintiff knew of

infringing activities); *E.I. du Pont de Nemours & Co. v. Polaroid Graphics Imaging, Inc.*, 706 F.

Supp. 1135, 1145 (D. Del.), *aff'd*, 887 F.2d 1095 (Fed. Cir. 1989) (finding that a multi-year "delay

until infringement made litigation economically worthwhile was acceptable"); *Advanced Transit*

Dynamics, 2015 WL 12516692, at, *26 ("In particular, 'tardiness is not particularly probative in

the context of ongoing, worsening injuries.'"); *Hologic, Inc. v. Minerva Surgical, Inc.*, 2016 WL

3143824, *10 (D. Del. June 2, 2016) (treating as a "neutral" factor that plaintiff was aware of

infringing device for nearly four years).

III.   THE BALANCE OF EQUITIES FAVORS DENSIFY

███ from infringement by

VMware, a multi-billion dollar company with extensive reach, distribution channels, and

marketing, and having almost 99% of the *Fortune 1000* as customers. Hillier Decl. ¶ 42. ████████

███

██ *Id.* ¶¶ 128-131.

Metalcraft, 848 F.3d at 1369 ("[I]n the absence of an injunction, Scag would face substantial

hardship in being forced 'to compete against its own patented invention.'"). By contrast, VMware

still sells the prior version of its vROps product, vROps 6.7. If it offers vROps v7 upgrades for

"free," this would reduce revenue losses from a preliminary injunction. *Id.* ¶ 112. Any delay in

10925146/1

new sales of vROps 7.0 or 7.5 until trial would cause less harm to VMware than the ▮▮▮▮▮

▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮. *See Trak, Inc. v. Benner Ski KG*, 475

F. Supp. 1076, 1078 (D. Mass. 1979) (enjoining defendant at commencement of campaign would

"nip[] the operation in the bud" and avoid defendant's entrenchment, "making permanent relief

more problematical"). Moreover, one who elects to build a business on a product found to infringe

cannot be heard to complain if an injunction against a continuing infringement impacts the

business so elected. *Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1156 (Fed. Cir. 2011).

IV.   A PRELIMINARY INJUNCTION HERE SERVES THE PUBLIC INTEREST

Protecting patent rights protects the public interest in the patent system and the innovation

it fosters. *Celsis*, 664 F.3d 922 at 931; *Abbott Labs*, 544 F.3d at 1362 ("To the extent that this

Court has found a substantial likelihood that the [patent in suit] is valid and enforceable, there can

be no serious argument that public interest is not best served by enforcing it"). "Enforcing patent

rights is especially important where there is egregious conduct to be addressed and deterred…., as

there is here." *Edwards Lifesciences*, 2014 WL 1493187, at *11. Further, a preliminary injunction

would merely prevent VMware from selling new features that will still be available from Densify.

QBAS, 2010 WL 7785955, at *15.

The public has an "interest in protecting [the] right to exclude others from" violating a

patent. *Wahpeton Canvas Co. v. Gebhart Enterprises, Inc.*, 996 F.2d 318 (Fed. Cir. 1993).

V.   CONCLUSION

For the foregoing reasons, Densify respectfully requests that the Court grant Densify's

Motion for a Preliminary Injunction, and enter the proposed order attached to the PI Motion.

10925146/1

Dated: May 6, 2019

Respectfully submitted,

/s/ Kenneth L. Dorsney
Kenneth L. Dorsney (#3726)
kdorsney@morrisjames.com
Morris James LLP
500 Delaware Avenue, Suite 1500
Wilmington, DE 19801
Telephone: (302) 888-6800
Telecopier: (302) 571-1750

Sarah O. Jorgensen
(*pro hac vice* application pending)
sjorgensen@reichmanjorgensen.com
Reichman Jorgensen LLP
1201 West Peachtree, Suite 2300
Atlanta, GA 30309
Telephone: (650) 623-1403
Telecopier: (650) 623-1449

Courtland L. Reichman
(*pro hac vice* application pending)
creichman@reichmanjorgensen.com
Shawna Ballard
(*pro hac vice* application pending)
sballard@reichmanjorgsensen.com
Jennifer P. Estremera
(*pro hac vice* application pending)
jestremera@reichmanjorgensen.com
Phillip Lee
(*pro hac vice* application pending)
plee@reichmanjorgensen.com
Joachim B. Steinberg
(*pro hac vice* application pending)
jsteinberg@reichmanjorgensen.com
Michael G. Flanigan
(*pro hac vice* application pending)
mflanigan@reichmanjorgensen.com
Reichman Jorgensen LLP
303 Twin Dolphin Drive, Suite 600
Redwood Shores, CA 94065
Telephone: (650) 623-1401
Telecopier: (650) 623-1449

Christine E. Lehman
(*pro hac vice* application pending)
clehman@reichmanjorgensen.com
Reichman Jorgensen LLP
1615 M Street, NW, Suite 300
Washington, DC 20036
Telephone: (202) 894-7311
Telecopier: (650) 623-1449

Jaime Cardenas-Navia
(*pro hac vice* application pending)
Reichman Jorgensen LLP
100 Park Avenue, Suite 1600
New York, NY 10017
Telephone: (646) 921-1474
Telecopier: (650) 623-1449

ATTORNEYS FOR PLAINTIFFS
CIRBA INC. (D/B/A DENSIFY)
AND CIRBA IP, INC.

24

10925146/1